

# Useful Kinks for Car Owners

## Making the Driveway Safe from Punctures—How to Rig Up a Bushing Press—Ideas Others Have Found Helpful

ONE reason why motorists have fewer punctures than in the early days of the game is that many more roads are hard surfaced, and that tacks, nails, and other tire damaging objects falling on the road are shared among a much larger number of motorists. That is why you are most likely to get a puncture on an infrequently traveled dirt road. The driveway to your own garage may be particularly bad. Nails and metal scrap falling in the driveway when the house was built stay there until picked up by your tires.

If you don't believe it, try fastening a number of old magneto magnets to a piece of board with a rake handle, as

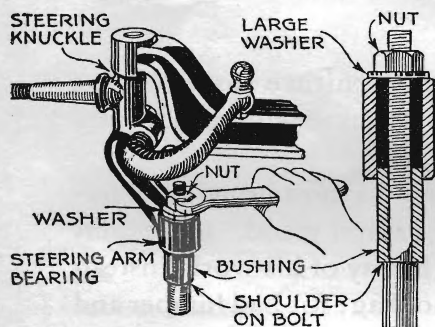


Fig. 2. Simple method of forcing bushing into place, using special bolt with nut and washer.

shown in Fig. 1, then drag the rake back and forth on your driveway. You will be surprised at the number of potential puncture producers you pick up.

### A Simple Bushing Press

DRIVING a bronze or brass bushing into place with a wooden mallet often is difficult and always is hard on the mallet. A much simpler way to force the bushing into place is shown in Fig. 2. Make up a special bolt with the shank slightly smaller than the hole through the bushing. The shoulder on the bolt should be square so that it will not injure the edge of the hole. By turning the nut you can pull the bushing into place easily. This method of inserting a bushing often will save dismantling the part to get it into the arbor press and may permit a job to be done where the shape of the part is such that it is hard to get at with the press. Best results will be obtained if the bolt is cut with a fine thread.

Note that when a bushing is forced into place the hole actually is reduced in size sufficiently to cause a jam if the bolt is made too close a fit.



Fig. 1. Cleaning the driveway of nails, metal scraps, and other tire puncturers is easy with this magnet-rake, made by fastening old magneto magnets to a piece of board with a rake handle attached, as pictured on right.

WILLIAM J. DOUGLASS, of Missouri Valley, Ia., wins this month's \$10 prize for his suggestion of a magnetic rake, shown in Fig. 1. Each month POPULAR SCIENCE MONTHLY awards \$10, in addition to regular space rates, for the best idea sent in for motorists. Other contributions that are published are paid for at the usual rates.

### Broken Glass Extractor

FISHING out the broken pieces of a window is difficult without some special means for grasping the edge of the glass. Fig. 3 shows how to make a tool that makes the job exceptionally easy. Take a piece of galvanized steel wire, bend it double, and form a small loop on each end. Tape these loops with ordinary friction tape. Then put bends in the wire, as shown, and pass the folded wire through a piece of  $\frac{3}{8}$ -inch pipe. The bends in the wire near the small

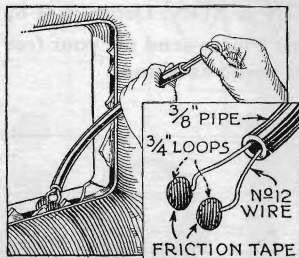


Fig. 3. Ingenious wire grips for extracting broken glass.

loops should be so gaged that when you pull on the wire the end of the pipe will force the small loops together. To use the tool push it down into the crack and feel around until the tape-covered loops are on opposite sides of one of the broken pieces of glass. Then, while holding the pipe stationary, pull up on the wire and the glass will be gripped tightly enough to pull it out.

### Filtering Out the Dust

THE level of the gasoline in the float chamber of a carburetor is controlled by a small needle valve operated by the rising and falling of the float. The action of this valve necessarily must be delicate since there is little power available to

operate it. The valve itself consists of a tapered seat with a tapered pin that is ground in to make a gasoline-tight joint. If the valve does not make a tight joint, gasoline will seep past and raise the level in the float chamber above the opening in the spray nozzle and it will flow out through the spray jet and leak out of the carburetor in a steady drip.

If the valve is properly ground in, the only possible cause of such a leak is a tiny piece of foreign matter such as a piece of dust lodging between the ground faces and keeping them apart. In localities where there is much dust a frequently unsuspected source of trouble is the vent pipe of the vacuum tank. Air is drawn into this pipe part of the time, and dust goes with it. Fig. 4 shows a cure for this trouble. The vent pipe is brought back through the dash and the end is covered with a piece of old stocking material that will filter out the dust.

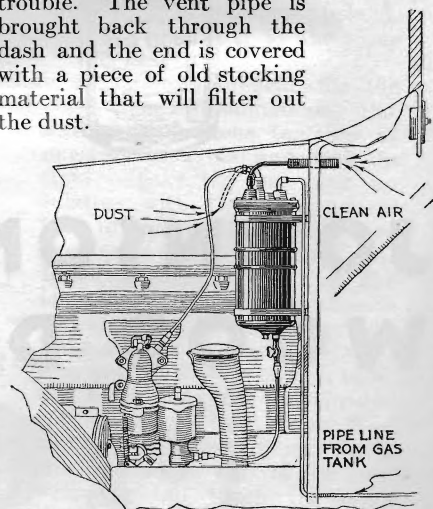


Fig. 4. How you can prevent dust particles from entering vent pipe of the vacuum tank.